

WHAT IS CLAIMED IS:

5 1. A method for determining a computer network's performance during operation of a software application using the computer network, comprising:

recording network traffic data while the software application is using the computer network;

10 generating from the network traffic data a latency sensitivity metric;

generating from the network traffic data a bandwidth sensitivity metric; and

15 comparing the latency sensitivity metric and the bandwidth sensitivity metric to determine the computer network's performance during operation of the software application.

2. The method of claim 1, wherein generating from the network traffic data the latency sensitivity metric includes:

20 generating from the network traffic data a plurality of computer network response times for a plurality of software application use scenarios at a constant computer network bandwidth value; and

25 generating the latency sensitivity metric from the plurality of computer network response times.

3. The method of claim 2, wherein the latency sensitivity metric is generated by calculating the standard deviation of the plurality of network response times.

30 4. The method of claim 2, wherein the latency sensitivity metric is generated by calculating the slope of a line defined by plotting the plurality of computer network response times versus the plurality of software application use scenarios.

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5. The method of claim 1, wherein generating from the network traffic data the bandwidth sensitivity metric includes:

5 generating from the network traffic data a plurality of computer network response times for a plurality of computer network bandwidth values for a software application use scenario; and

10 generating the bandwidth sensitivity metric from the plurality of computer network response times.

6. The method of claim 5, wherein the bandwidth sensitivity metric is generated by calculating the standard deviation of the plurality of network response times.

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7. The method of claim 5, wherein the bandwidth sensitivity metric is generated by calculating the slope of a line defined by plotting the plurality of computer network response times versus the plurality of computer network bandwidth values.

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8. The method of claim 1, the method further comprising generating from the network traffic data a return on investment data table for use in generating a return on investment metric.

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9. The method of claim 1, the method further comprising generating from the network traffic data a computer network simulation table for use in simulating a second computer network.

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10. A data processing system adapted to determine a computer network's performance during operation of a software application using the computer network, comprising:

a processor; and

35 a memory operably coupled to the processor and having program instructions stored therein, the processor being

operable to execute the program instructions, the program instructions including:

5 receiving network traffic data recorded while the software application is using the computer network;  
generating from the network traffic data a latency sensitivity metric;  
generating from the network traffic data a  
10 bandwidth sensitivity metric; and  
comparing the latency sensitivity metric and the bandwidth sensitivity metric to determine the computer network's performance during operation of the software application.

15 11. The data processing system of claim 10, wherein the program instructions for generating from the network traffic data the latency sensitivity metric further include:

20 generating from the network traffic data a plurality of computer network response times for a plurality of software application use scenarios at a constant computer network bandwidth value; and

generating the latency sensitivity metric from the plurality of computer network response times.

25 12. The data processing system of claim 11, wherein the latency sensitivity metric is generated by calculating the standard deviation of the plurality of network response times.

30 13. The data processing system of claim 11, wherein the latency sensitivity metric is generated by calculating the slope of a line defined by plotting the plurality of computer network response times versus the plurality of software application use scenarios.

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14. The data processing system of claim 10, wherein the  
program instructions for generating from the network traffic data  
5 the bandwidth sensitivity metric further include:

generating from the network traffic data a plurality  
of computer network response times for a plurality of  
computer network bandwidth values for a software application  
use scenario; and

10 generating the bandwidth sensitivity metric from the  
plurality of computer network response times.

15 15. The data processing system of claim 14, wherein the  
bandwidth sensitivity metric is generated by calculating the  
standard deviation of the plurality of network response times.

16. The data processing system of claim 14, wherein the  
bandwidth sensitivity metric is generated by calculating the  
slope of a line defined by plotting the plurality of computer  
20 network response times versus the plurality of computer network  
bandwidth values.

17. The data processing system of claim 10, the program  
instructions further including generating from the network  
25 traffic data a return on investment data table for use in  
generating a return on investment metric.

18. The data processing system of claim 10, the program  
instructions further including generating from the network  
30 traffic data a computer network simulation table for use in  
simulating a second computer network.

19. A computer readable media embodying computer program  
instructions for execution by a computer, the computer program  
35 instructions adapting a computer to determine a computer

network's performance during operation of a software application using the computer network, the computer instructions comprising:

5 receiving network traffic data recorded while the software application is using the computer network;

generating from the network traffic data a latency sensitivity metric;

10 generating from the network traffic data a bandwidth sensitivity metric; and

comparing the latency sensitivity metric and the bandwidth sensitivity metric to determine the computer network's performance during operation of the software application.

15 20. The computer readable media of claim 19, wherein the program instructions for generating from the network traffic data the latency sensitivity metric further include:

20 generating from the network traffic data a plurality of computer network response times for a plurality of software application use scenarios at a constant computer network bandwidth value; and

generating the latency sensitivity metric from the plurality of computer network response times.

25 21. The computer readable media of claim 20, wherein the latency sensitivity metric is generated by calculating the standard deviation of the plurality of network response times.

30 22. The computer readable media of claim 21, wherein the latency sensitivity metric is generated by calculating the slope of a line defined by plotting the plurality of computer network response times versus the plurality of software application use scenarios.

23. The computer readable media of claim 19, wherein the  
program instructions for generating from the network traffic data  
5 the bandwidth sensitivity metric further include:

generating from the network traffic data a plurality  
of computer network response times for a plurality of  
computer network bandwidth values for a software application  
use scenario; and

10 generating the bandwidth sensitivity metric from the  
plurality of computer network response times.

24. The computer readable media of claim 23, wherein the  
bandwidth sensitivity metric is generated by calculating the  
15 standard deviation of the plurality of network response times.

25. The computer readable media of claim 23, wherein the  
bandwidth sensitivity metric is generated by calculating the  
slope of a line defined by plotting the plurality of computer  
20 network response times versus the plurality of computer network  
bandwidth values.

26. The computer readable media of claim 19, the program  
instructions further comprising generating from the network  
25 traffic data a return on investment data table for use in  
generating a return on investment metric.

27. The computer readable media of claim 19, the program  
instructions further comprising generating from the network  
30 traffic data a computer network simulation table for use in  
simulating a second computer network.